

# AVIATION

*The Oldest American Aeronautical Magazine*

NOVEMBER 5, 1923

Issued Weekly

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Where ground transport is poor: British troop-carrier plane in Egypt

VOLUME  
XV

## SPECIAL FEATURES

NUMBER  
19

STORY OF THE SCHNEIDER CUP RACE

LESSONS OF THE SCHNEIDER CUP SEAPLANE RACE

ARMY COMMITTEE FINDS AIR SERVICE SITUATION CRITICAL

THE GARDNER, MOFFAT CO., INC.  
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under Act of March 3, 1879.

## CURTISS WINS AGAIN



HANZ CURTISS RACER

On Sept. 28, 1923 at Cowes, England, the Navy Curtiss Seaplanes with Curtiss D-12 Motors took first and second place in the International Races, winning the SCHNEIDER CUP and establishing a NEW WORLD'S SPEED RECORD FOR SEAPLANES—177 MILES PLUS PER HOUR.

On Oct. 6, 1923 at St. Louis, U.S.A., the Navy Curtiss Racers with Curtiss D-12-A Motors took first and second place winning the PULITZER TROPHY for the third successive year and again establishing a NEW WORLD'S SPEED RECORD—243 MILES PLUS PER HOUR.

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## Fighting Weather Hazards

Before airplanes can successfully compete throughout the year with other means of transportation, the difficulties which force them to seek land when bad weather is encountered must be overcome. Many problems still remain to be solved, of course, before our ships will be able to surmount all the hazards of the weather, but with the help of other industries, these problems are and are being overcome. A big step forward was taken when the night air mail experiments demonstrated that darkness need be no handicap to continuous flying.

One of the main drawbacks to year round

service has been cold weather. The natural low temperatures of winter time, combined with the low temperatures found at high altitudes make efficient engine lubrication difficult.

In some types of ships, devices for heating the lubricating oil are supplied; other types having exposed oil tanks and pipes require an oil which flows readily at low temperatures and yet withstands the high bearing pressures.

A lubricating oil which will overcome this problem of winter flying has been developed by the Standard Oil Company (Indiana).

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This oil, together with Standard Aviation Gasoline and Standard Aero Oil, are avail-

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These products and this service are the best which this company can offer, for we also believe that there is a patriotic privilege to assist in the development of the aviation industry, constituting, as it does, a further economic resource for the protection of our country.

The official guide of the United States Patent Office, *Patent Information Bureau*, which lists every copy of all Standard Gasoline and Lubricating Oils, contains a complete history page compiled by the Standard Service Department, giving the history and development of the U. S. A. regular with a list of leading fields of which Standard Aero Oil is one, and Standard and Imperial Oils. This may be obtained.

Three prints are also listed in our booklet, "Trade Facts," a copy of which will be sent free, on request.

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## The Publisher's News Letter

Usually overorganization is a detriment rather than an aid. In attempting to cover all the various activities in this country which are concerned with aeronautical progress, the duplication and multiplied effort becomes particularly apparent to the publishers of an aviation paper. In almost every annual agency there seems to be a tendency to spread out too thin over too large a field. It is possible that a delineation of effort might be a great help at this time.

\* \* \* \*

Take the various civilian organizations that are interested in aircraft and its advancement. The National Aeronautic Association started its work last year with announcements about its scope which seemed to the overzealous young men in charge to cover the entire aeronautical field. The statement that it intended to coordinate all aeronautical activities was accepted by older and better established groups, as it soon became apparent that instead of coordinating, the N.A.A. was rapidly assuming the posture of overruling. Fortunately this policy did not continue quickly and was stopped before it did serious damage. Since then the N.A.A. has been working for a definite policy. Until the officers were elected, it was thought advisable to keep no work in well-defined channels. As the nature of scope will be considered by those in charge at meetings to be held shortly, no more pertinent suggestion can be made at this time than to express the hope that a clear statement of the N.A.A. scope will be made after giving due consideration to the function of other organizations.

\* \* \* \*

In the industry there is the Manufacturers Aircraft Association and the Aeronautical Chamber of Commerce. This latter is concerned mainly with the cross-license agreement covering patents of its members and the transfer of payment and costs under this arrangement. The organization of membership is such that it was not possible for it to include all of the aircraft manufacturers, the accessory manufacturers. The Aeronautical Chamber of Commerce was formed to give the entire aircraft manufacturing field an opportunity to have an organization to look after the broad problems of the industry. Its purpose is constructive and it aims to foster every industrial phase of aeronautics. It publishes reliable and current issues in its field. Its information service and press releases keep aeronautical matters before the public. It advocates uniformity of trade practices, assists in establishing landing fields and air routes, advocates aircraft legislation, arbitrates differences between members and in every way tries

to promote the advancement of the aeronautical industry. Its one limitation is that it cannot engage in any business for profit. So much for the industry.

\* \* \* \*

The Society of Automotive Engineers has kept alive the engineering practice of aeronautics by its including in its automotive deliberations, the problems of aircraft and power plant engineering. At its meetings it has created the development of aviation and stimulated interest in this branch of engineering. Two aeronautical sections with similar aims had disappeared when the S.A.E. took up the work and gave the technical side of the art substantial support.

\* \* \* \*

Then throughout the country there are Aero Clubs, Flying Clubs, Air Boards, Aviation Committees and three or four local chapters of the N.A.A. These local groups have striven to keep local interest aroused with varying success. It is evident that there is great duplication here but there is no doubt in the minds of those who have studied the situation that centralized locality groups have done much to promote a lively interest in aviation.

\* \* \* \*

The Army and Navy Air Service Association was formed by officers during the war for the purpose of working together with a board of selected officers, the thousands of officers then in the Army and Navy air services. Instead of allowing it to become a powerful agency for assisting our air services through civilian support, it was seized upon by officers of the Army Air Service as a means of raising a popular subscription fund. Not only was the Association's funds a hopeless publishing venture, it caused to be organized the Air Service Publishing Company, a business corporation in which it took stock and offered stock to civilians. The U. S. Air Service Magazine announced that it was no longer a service magazine. After another financial setback with this system the Army and Navy Air Service Association has been dormant except as it has been useful in supporting a publishing company which publishes a so called "service" magazine.

\* \* \* \*

What is the remedy? Obviously a suggestion of all the agencies now engaged in promoting our aeronautical activities is that there will be no overlapping and duplication. An agreement by the various groups that are now in the field as to just what their functions are would do much to clarify the situation and make for aeronautical progress.

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# AVIATION

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Vol. XV

NOVEMBER 5, 1923

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## The Aeronautical Situation

**T**HIS is a report of the *conditions* appealed by the Secretary of War to investigate the present condition and future status of the Army Air Service has been submitted to the Joint Army and Navy Board for further study. The report will remain a worker in the path of progress of our service, it deals directly and clearly with the deplorable condition of American aeronautics. Not only does it sound the alarm for an awakening to the danger now facing the country, but it also stresses the pre-eminence of the industry with a full knowledge of its importance in national defense.

The Navy can be expected to make a similar report if given the opportunity, for Admiral Moffett said at St. Louis: "As far as the Navy's situation, I would like to add to what General Patrick has said about the Army. The Navy is in the same situation, but it is twice as badly off, because we have only half what the Army has. That is where we stand. We need help just as much as they do, and feel the same way toward the industry. What General Patrick has so well expressed."

An Associated Statement of War Davis so aptly says: "What we are doing is literally starving to death the most vital branch of our national defense. If Congress does not make adequate appropriations in the near future, our Air Service will be rendered absolutely impotent."

Mr. Davis has given every strongest emphasis to his views in defense that unless Congress grants larger appropriations for the Air Service, he will not assume the responsibility for lack of aircraft in any future emergency. No governmental aid could speak in stronger terms.

The slide blower for the deplorable state of affairs cannot however lie placed on Congress. What Congress wants is a definite continuing program for the defense of the country as a whole, and not piecemeal plans presented by several governmental agencies, all hoping to build up their own particular air programs. It is with this plan of aeronautical policy that the Joint Army and Navy Board should start. Let it introduce how easily could be saved by shortening the deployment of war by the Army and Navy. Let it tell Congress and the country frankly and specifically just what would it believe the Army and Navy needs and if such types are test. Let it lay down a program for spending the appropriations in such manner that it will give the country weapons for service and not only for experimental purposes.

But there are other aspects to this question. Aviation has for a number of years been one of "half-baked" appropriations as made by Congress. Between against the offense in the subject of aviation has been most disheartening. Military and naval aviation have through departmental rivalries not reached a stage where only can readily seem to move. That is to place the aeronautical status of the United States finally before the country so that Congress will be compelled to act. We believe that this could best be accomplished in a set. We believe that this could best be accom-

plished by having the President appoint a civilian commission of nationally known men which would be charged with outlining a continuing aeronautical air policy—governmental and civilian. Such a commission should on the first place report on the various needs of the Army, the Navy, the Post Office Department, the Coast Guard, the Forest Service and all other government agencies which either use or contemplate using aircraft for one purpose or the other. It should not only consider these needs, but also coordinate them in such manner as to avoid the present wasteful duplication of efforts. In the second place, the Commission should determine the place of civil aviation in the structure of national defense, and make recommendations for its development.

As the Commission would be completely free from departmental interests and limitations, many keen observers believe that only such a body of men could give the President, the Director of Budget and Congress complete and unbiased recommendations that they will revere.

## Engineering in Airplane Design

**AIRCRAFT** engineering development in the last few years has made its greatest progress through organized rather than individual effort. The associated industry in this country in today in a difficult position because experimental aircraft can so easily be taken on by individuals or organizations so small that they cannot give sufficient attention, or have inadequate facilities, for engineering research and design.

Under the present system our aircraft business is competitive as to price, and entirely non-competitive as to final performance. And yet, so long as the Government is the only purchaser, its contracting officer must purchase at competitive prices, almost regardless of airplane performance.

When an airplane and engine fits the Contract rules that won the Pulitzer and Schneider Trophies, can be taken from the floor of the factory and immediately, without adjustment, break all existing world's records for speed, it is clear testimony as to the degree of accuracy with which the laboratory and design data can be relied upon.

Aeronautical progress will probably come in the future more as a result of a combination of engineers and specialists working on an aeronautical problem than from the inspiration or individual effort of the one-man designer. Such a procedure will be necessarily expensive and will have to meet its compensation. It is not improbable that the aircraft industry may gradually be grouped into three distinct classes, the first, organizations capable of producing aircraft which result from the design of engineering specialists; second, the mass avia-dealership categories built up around a capable aeronautical designer; and third, the manufacturer who thinks more of producing Chinese copies at a competitive price than any advance in the art.

# Army Committee Finds Air Service Situation Critical

## Peace Organization of Army Air Service Insufficient for War Requirements in Personnel and Equipment

The Secretary of War has authorized publication of the following statement relative to the report of a committee which was appointed to investigate and report upon the present status of the Air Service of the Regular Army.

This committee, composed of Maj. Gen. William L. Lander, Brig. Gen. Frank M. Willis, Brig. Gen. Hugh A. Drane, Brig. Gen. Stuart Wadsworth, Col. Irvin H. Ellett, Lt. Col. Gail W. Gallop, Lt. Col. Frank P. Lakes and Maj. Herbert A. Dargatz, Secretary, after an exhaustive study of the situation has recommended that the present organization of the Air Service of the Regular Army be maintained, but that the organization of the Air Service of the National Guard be reorganized, will very soon cause the important missioned areas where aerial tactics and strategy of aerial warfare, particularly as an offensive phase, are now recognized as being as important as the tactics of the ground and sea forces, to much greater worth while to be negligible as a factor in National Defense.

### Industry Entirely Dependent on Government

The failure of the aircraft industry to develop commercially has resulted in many aircraft manufacturers being wholly dependent on the Government for their existence. Government contracts are the only source of income, and to have appropriations and the fact that no commercial manufacturer can compete with the industry, the war must be used up before any large amount of new aircraft can be purchased. This war equipment is rapidly deteriorating and becoming unsafe to fly.

The strength of the Air Service authorized in the amendment to the National Defense Act, approved June 4, 1920, in the Regular Army of 18,000 men and 2,000 enlisted men was 18,000 officers and 28,000 enlisted men, including 20,000 flying cadets. Present day data the committee reports state that the peace strength of the Regular Army has undergone several reductions. There are now authorized 15,000 officers and 22,000 enlisted men of which the Air Service accounts as 1,000 officers and 1,000 enlisted men, including the two crews, and 90 flying cadets. Of these only 100 officers and 8,000 enlisted men and 90 flying cadets are now available (Feb. 18, 1923). In view of the limitations imposed by law on the strength of the Regular Army in time of peace and the small percentages of officers and enlisted men allotted to the Air Service, the present organization of the Air Service can never be as effective as the war requirements and affords little if any room for expansion upon which war requirements in either personnel or material can be built.

### Air Service Equipment Depleted

The equipment situation as it exists, that with a maximum production of aircraft as planned may by July 1, 1926, there will be available less than 500 serviceable airplanes to meet a requirement of over five times that needed for the present small Air Service. In this regard the report concludes that, "The larger part of the aircraft now on hand are war produced and are deteriorating rapidly. Furthermore, the bulk of these aircraft are of an obsolescent flying type and are unsatisfactory for combat. It is recommended that new aircraft be procured to replace that built during the World War, and that additional aircraft be purchased to make up the deficit that is currently existing. Since it now requires about eighteen months to insure delivery of aircraft after the contract has actually been executed, it is evident that no time can be expected for the present situation to improve."

### Air Service in Critically Condition

The personnel and equipment situation is summarized by the Committee in the following statement:

"The Committee feels the Air Service to be in a very unfortunate and critical situation. Since the World War, service has come to play an increasingly important part in military operations, but resources have not been able to keep pace with the demand. Due to the reduction of aircraft, the personnel of the Air Force has been greatly depleted; moreover, aircraft have not been manufactured to replace the types produced during the World War. For lack of business our aircraft industry is languishing and may disappear. It requires time to begin production of air planes and it takes time to train personnel. We cannot improve in the air at the very outset of a war. Therefore, it is the opinion of the Committee that our peace-time Air Service must be practically disorganized in an early date. The

aircraft industry in the United States at present is entirely inadequate to meet peace and war requirements. It is rapidly deteriorating and under present conditions will soon become completely disorganized. Measures for the maintenance of a wholly private industry have been proposed by Government and a graphic representation of the state of the aircraft industry shows how far the industry falls short of being this war time requirements and that places in sufficient quantity would not be produced under present conditions, and possibly two years after the war had begun. The development of a national defense will still require the maintenance of a large Air Service and the Air Service must be organized, but orders from the military services must be discontinued and placed at least for the immediate future, if this industry is to kept alive. Should a national emergency confront the country within the next few years the Air Service would be unable to play its part in meeting it."

### Need of Continuing Building Program

The Committee recognizes the necessity for the adoption of a continuing program similar to that suggested by Mr. Macwright, former Assistant Secretary of War, as the only practical solution of the equipment problem. The Committee recommends that the Air Service be organized so that which the peace requirements in material can be met by adopting a continuing production program extending through a period of approximately ten years with adequate annual appropriations and authorizations to make the program effective. It is estimated that the annual appropriations required to make this program feasible, exclusive of cost of aircraft, parts, etc., will be approximately \$20,000,000, of which approximately \$10,000,000 would be for operating expenses and \$10,000,000 for purchase of new aircraft, the first annual increasing and the second decreasing as the program develops—the total remaining at about the same point.

The sole shortage of aircraft is the high rate of obsolescence. The Flying Officers, due to natural accidents, have reduced the flying personnel of the Air Service to such a small nucleus that the Committee feels a continuing production program extending over a period of approximately ten years should parallel the production program. Considering the fact that Congress has not yet appropriated money for the construction of aircraft in excess of that now allotted to the Air Service should be, in addition to the present authorized strength of the Regular Army. It is impracticable to reduce the present authorized strength the personnel and add for the expansion of the Air Service without taking the additional strength from the Regular Army, the old and new aircraft already water-rotted and rotten, and, therefore, the Committee is of the opinion that Congress should be asked to provide additional personnel for the expansion of the Air Service.

**Official Aircraft Census**

The Department of Commerce has just issued a census of the aircraft industry for the year 1922. It should be noted that this census, where aircraft are grouped with engines, wear wheels and locomotives, only includes establishments which manufacture complete aircraft and their component parts other than structural parts. Establishments making aircraft engines are classified in the "airplane and motor vehicle" industry without specific reference.

Something more than one-half of the total value of aircraft and parts manufactured in 1922 was reported by establishments who were engaged primarily in other industries but manufactured aircraft and parts as secondary products. Data for December 1922 production is given in the total shown in Table I, but the statistics in Table II relate only to the operation of establishments classified in the aircraft industry.

Changes in classification, as figures for census year 1922 are given. Moreover, the statistics for 1921 are not directly comparable with those for 1922 and for the reason that establishments engaged primarily in the manufacture of aircraft, either in engines and wheels, in 1921 were classified as in aircraft and parts, while in 1922 were classified only those establishments which manufacture complete aircraft were so classified. The

enormous increase between 1914 and 1919 and the pronounced decrease between 1919 and 1922 are due in some measure to the fact that the production in 1919 included the completion of the World War, and was, therefore, abnormal.

Table II shows an increase in the value of airplane manufactured in 1922 as compared with 1921, accompanied, however, by a considerable decrease in number; while an exceedingly great decrease took place in the production of airplane, engine, and parts, the value of which was \$10,000,000, but the value of work done during 1922 on aircraft construction at the close of the year was considerably less than the corresponding item for 1921.

Table III gives detailed statistics of products for 1921 and 1922. The figures for 1922 can be converted to number and value of the entries for that year show the production of airplane, engine, and parts, the value of which was \$10,000,000, together with "All other products," including \$600,000 and receipts for repair work amounting to \$600,000.

The item "All other products, including repair work" comprises the value of lighter-than-air craft, including free and captive balloons and of various miscellaneous products and articles pertaining to the aircraft industry but made in voluntary products by establishments engaged primarily in the manufacture of aircraft and parts.

TABLE I. GENERAL STATISTICS FOR THE UNITED STATES  
1911, 1912, AND 1922

	1911 <sup>a</sup>	1912 <sup>b</sup>	1922 <sup>c</sup>	1921 <sup>d</sup>	1920 <sup>e</sup>
Number of establishments	29	31	14	14	14
Firms engaged	3,075	4,137	325	322	3,048
Partnerships	2	14	0	0	0
Proprietorships	835	842	41	41	3,048
Wage earners	—	—	—	—	—
Estimated wage rates	\$1,000	\$1,045	\$100—\$1,000	\$100—\$1,000	\$1,000
Capital and stock	\$1,770,000	\$1,000,000	\$100,000	\$100,000	\$1,000,000
General expenses	\$1,000,000	\$1,000,000	\$100,000	\$100,000	\$1,000,000
Interest on capital	—	—	—	—	—
Interest on stocks	—	—	—	—	—
Interest on general expenses	—	—	—	—	—
Plant and fixtures	—	—	—	—	—
Fixtures	—	—	—	—	—
Plant	—	—	—	—	—
Fixtures and plant	—	—	—	—	—
Fixtures and plant, value	—	—	—	—	—
Value of products	\$1,000,000	\$1,000,000	\$100,000	\$100,000	\$1,000,000
Value of products, value	—	—	—	—	—
Total	4,074,000	7,047,000	614,000	614,000	4,046,000

<sup>a</sup> The figure for 1911 does not include a contribution with which the aircraft manufacturing companies made to the Red Cross Fund. The figure for 1912 includes a contribution with which the aircraft manufacturing companies made to the Red Cross Fund. The figure for 1922 includes a contribution with which the aircraft manufacturing companies made to the Red Cross Fund.

<sup>b</sup> The data for 1912 are derived from the same sources as the data for 1911.

<sup>c</sup> The data for 1922 are derived from the same sources as the data for 1921.

<sup>d</sup> The data for 1921 are derived from the same sources as the data for 1920.

<sup>e</sup> The data for 1920 are derived from the same sources as the data for 1919.

**TABLE II. PRODUCTION BY NUMBER AND VALUE FOR THE UNITED STATES, 1911, 1912, AND 1922**

	1911 <sup>a</sup>	1912 <sup>b</sup>	1922 <sup>c</sup>	1921 <sup>d</sup>	1920 <sup>e</sup>
Total	—	—	—	—	—
Establishments	3,075	4,137	325	322	3,048
Partnerships	2	14	0	0	0
Proprietorships	835	842	41	41	3,048
Establishments at close of year	372	541	322	322	3,048
All other products including repair work	—	—	—	—	—
Total	4,074,000	7,047,000	614,000	614,000	4,046,000

<sup>a</sup> Includes systems reported by a establishment, each having products which are not included in the totals for aircraft, engines, wear wheels and locomotives, and parts manufactured as auxiliary products, totaling \$10,000,000.

<sup>b</sup> Includes systems reported by a establishment, each having products which are not included in the totals for aircraft, engines, wear wheels and locomotives, and parts manufactured as auxiliary products, totaling \$10,000,000.

<sup>c</sup> Includes systems reported by a establishment, each having products which are not included in the totals for aircraft, engines, wear wheels and locomotives, and parts manufactured as auxiliary products, totaling \$10,000,000.

<sup>d</sup> Includes systems reported by a establishment, each having products which are not included in the totals for aircraft, engines, wear wheels and locomotives, and parts manufactured as auxiliary products, totaling \$10,000,000.

<sup>e</sup> Includes systems reported by a establishment, each having products which are not included in the totals for aircraft, engines, wear wheels and locomotives, and parts manufactured as auxiliary products, totaling \$10,000,000.

**TABLE III. IMPORTS AND EXPORTS OF AIRCRAFT, BY NUMBER AND VALUE, 1911, 1912, AND 1922**

	1911 <sup>a</sup>	1912 <sup>b</sup>	1922 <sup>c</sup>	1921 <sup>d</sup>	1920 <sup>e</sup>
Total imports	—	—	—	—	—
Imports	—	—	—	—	—
Exports	—	—	—	—	—
Total exports	—	—	—	—	—
Total imports and exports	—	—	—	—	—
Total imports	—	—	—	—	—
Total exports	—	—	—	—	—
Total imports and exports	—	—	—	—	—
Total imports	—	—	—	—	—
Total exports	—	—	—	—	—
Total imports and exports	—	—	—	—	—

<sup>a</sup> Imported systems reported by a establishment, each having products which are not included in the totals for aircraft, engines, wear wheels and locomotives, and parts manufactured as auxiliary products, totaling \$10,000,000.

<sup>b</sup> Imported systems reported by a establishment, each having products which are not included in the totals for aircraft, engines, wear wheels and locomotives, and parts manufactured as auxiliary products, totaling \$10,000,000.

<sup>c</sup> Imported systems reported by a establishment, each having products which are not included in the totals for aircraft, engines, wear wheels and locomotives, and parts manufactured as auxiliary products, totaling \$10,000,000.

<sup>d</sup> Imported systems reported by a establishment, each having products which are not included in the totals for aircraft, engines, wear wheels and locomotives, and parts manufactured as auxiliary products, totaling \$10,000,000.

<sup>e</sup> Imported systems reported by a establishment, each having products which are not included in the totals for aircraft, engines, wear wheels and locomotives, and parts manufactured as auxiliary products, totaling \$10,000,000.

<sup>f</sup> Includes systems reported by a establishment, each having products which are not included in the totals for aircraft, engines, wear wheels and locomotives, and parts manufactured as auxiliary products, totaling \$10,000,000.

<sup>g</sup> Includes systems reported by a establishment, each having products which are not included in the totals for aircraft, engines, wear wheels and locomotives, and parts manufactured as auxiliary products, totaling \$10,000,000.

<sup>h</sup> Includes systems reported by a establishment, each having products which are not included in the totals for aircraft, engines, wear wheels and locomotives, and parts manufactured as auxiliary products, totaling \$10,000,000.

<sup>i</sup> Includes systems reported by a establishment, each having products which are not included in the totals for aircraft, engines, wear wheels and locomotives, and parts manufactured as auxiliary products, totaling \$10,000,000.

<sup>j</sup> Includes systems reported by a establishment, each having products which are not included in the totals for aircraft, engines, wear wheels and locomotives, and parts manufactured as auxiliary products, totaling \$10,000,000.

<sup>k</sup> Includes systems reported by a establishment, each having products which are not included in the totals for aircraft, engines, wear wheels and locomotives, and parts manufactured as auxiliary products, totaling \$10,000,000.

<sup>l</sup> Includes systems reported by a establishment, each having products which are not included in the totals for aircraft, engines, wear wheels and locomotives, and parts manufactured as auxiliary products, totaling \$10,000,000.

<sup>m</sup> Includes systems reported by a establishment, each having products which are not included in the totals for aircraft, engines, wear wheels and locomotives, and parts manufactured as auxiliary products, totaling \$10,000,000.

<sup>n</sup> Includes systems reported by a establishment, each having products which are not included in the totals for aircraft, engines, wear wheels and locomotives, and parts manufactured as auxiliary products, totaling \$10,000,000.

<sup>o</sup> Includes systems reported by a establishment, each having products which are not included in the totals for aircraft, engines, wear wheels and locomotives, and parts manufactured as auxiliary products, totaling \$10,000,000.

<sup>p</sup> Includes systems reported by a establishment, each having products which are not included in the totals for aircraft, engines, wear wheels and locomotives, and parts manufactured as auxiliary products, totaling \$10,000,000.

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# The Story of the Schneider Cup Seaplane Race

How American Aircraft Piloted by Americans Triumphed Over the Foreign Competitors

The team of Navy pilots who won the Schneider Cupampionship race, and the Navy entrants in the Gordon Bennett seaplane race held in New York on Oct. 18, from the R.R. Lavoie. They were received at the dock by Rear Admiral C. P. Franklin, U.S.N., Commandant of the Third Naval District, with members of his staff, and numerous friends of the sailors. During the day the Gordon Bennett race was on the stage in the social hall of the Lavoie, where it was a source of attraction to the passengers of the ship throughout the trip across the Atlantic.

Concerning the experiences of the Navy Seafarers Cup pilots, Capt. E. W. Woods, in charge of the team, placed special importance on the splendid cooperation and friendly atmosphere that he found among the English members of the race. Not only in connection with the meets, but in their social and personal relations the English were extremely cordial. He said that the leaders of both French and English entries in this year's race have encouraged their nation to build planes to compete in the Cup on the United States in 1930, if their governments will award them the proper support.

AIRPORT is indebted to Lieutenant Woods for much of the following information on the meet.

## The Schneider Cup

The Schneider Maritime Aviation Cup was presented in 1912 to the Aero Club of France by M. Georges Schneider, a French entrepreneur and statesman, with a view to developing high speed seaplanes.

The Cup is a magnificent trophy of gold, silver and bronze, valued at about \$30,000. For the first three years M. Schneider also presented a cash prize of \$5,000 to be distributed among the pilots finishing first, second and third. This cash prize was eliminated in 1922.

In order to develop the seaplane craft of seaplanes, the most difficult problem in the world, the Schneider Cup has been held every year since 1912, except during the war, and requires the pilot to take off over one starting line, land, take off half mile between two buoys in a speed over 12 mph, take off, land, then one-half mile between a second set of two buoys, then to take off, land and taxi over the starting line. Therefore the seaplane must remain at anchor for long periods. This presents considerable handicaps to the type of aircraft required, which speed cannot be obtained solely by increasing weight or strength of the flying structure.

No changes in the seaplane, other than shifting propellers, are allowed between the navigability trials and the race.

The rotary starting the cup is required to subdue and hold the propeller for the succeeding race.

In 1928 the French entry, which had the Schneider Cup as a prize, was so far behind that the Schneider Cup is a new cup. Aeronautical studies for developing aerodynamic features of high speed, and a type of plane, Navy and British, were underway as time of war. The present policy of the Naval Bureau of Aeronautics is to focus pilots and design flying methods and tactics on more economical use of potential flying speed, and to depend upon competition similar to this to develop high speed to gain.

## The American Team

It was in accordance with this policy that the U. S. Navy decided to raise this year's entry for the Schneider Cup. Four seaplanes, all of the twin-flat, biplane type, and equipped with four cylinders, were developed for the Schneider Cup. The first was a Curtiss CR3 (465 hp Curtiss D-12 engine), the second a Curtiss TR3 (285 hp Wright E-4 engine), the third a Curtiss TR3 (285 hp Wright E-4 engine), and the fourth a Curtiss TR3 (285 hp Wright E-4 engine). The Navy-Wright racer, generally considered the "fast horse" of the meet, was unfortunately eliminated before the navigability trials by a broken propeller blade which ripped open the fuselage and caused the machine to crash on landing. The pilot, Lieutenant Charles T. Smith, was not injured. The machine had given very high performance and had remained an American E-4 Cup speed of about 110 mph being attained. This incident also showed the wisdom of the Navy in seeking to the race a spare machine in case a full team of three on hand in all circumstances.

The Navy-Wright was a new type in the accepted class of the meet. The two Navy-Curtiss racers had the same wings and fuselage as the land plane on which Bernardon Aviatrix won the Pulitzer Trophy race for the Navy in 1921. In fact the two machines were in possession of the Navy Department since that year, and they were entered in the 1922 Pulitzer Trophy race, won by the Curtiss team. Aviatrix had wing fold mechanism, shooting third and fourth. For the Schneider Cup



The Schneider Cup—culminating Zepelin flying its course which the Navy-Curtiss victory brought to America for the first time

the identical machines were taken out of storage and fitted with specially built pusher and Curtiss-Baldwin engines. The first of these did not seem to give sufficient torque for the Schneider race, a small, 6-ply wood was placed in each piston, from which the gasoline was pumped up into the main tank during flight. It will be seen then, that the winner of the Schneider Cup was of 1922 vintage, and not of 1928. In the trial flights our machine made better than 150 mph and was considered the best in the world and the fastest per cent of speed before the race, a speed of only 115 mph/hr. was announced for public consumption.

The TEBA race, held by the Naval Aircraft Factory, is no more than the Curtiss team a new machine, for it is identical in construction with the TR3 plane on which A. G. Garrison, U.S.N., won the Curtis Marine Flying Trophy last year in October. The only change consisted in replacing the 285 hp Wright-Lawrance J-1 engine with a 40 hp Wright E-4 engine.

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Official Photo, U. S. Navy

Two of the American entries—On the left, the Navy-Curtiss CR3 (465 hp Curtiss D-12 engine) on which Lieut. D. R. Jones, U.S.N. won the 1923 Schneider Cup race. Lieut. R. Jones, U.S.N. finished second with the second of the model. On the right, the Navy TR3 (285 hp Wright E-4 engine) piloted by Lieut. F. W. Woods, U.S.N.

## The British Team

The British Schneider Cup team originally consisted of three planes. One of these, the Supermarine biplane, with 450 hp. Napier Lion engine, was driven by its pilot, Major G. H. Thompson, and the other two, a biplane and a monoplane. The second British entry was the Supermarine "Sea Lion" III flying boat with Napier "Lion" engine, pilot W. C. Baird. This entry was essentially the same machine that won the Schneider Cup last year at St. Sébastien, Italy, but the engine was reduced from 350 to 300 hp, new wings were fitted and the dorsal fin removed.

The third British entry was the Blackburn "Sleuth," also with 350 hp. Napier "Lion" engine. This plane, too, was a biplane flying boat, but with a very small bottom wing, and it was notable for the mounting of the engine which revolved on the top wing, and for its circular propeller. The last, dating back to 1928, was that of the first Blackburn R-1B flying boat, a monoplane, powered by a 350-hp. Le Rhône engine, and which is known as the "Linton-Hughes" machine. This ship was created in the navigability trials while attempting to take off, the accident being either due to the pilot, Mr. Kesterton, losing control with high speed flying boats, or due to faulty controls. The machine stalled just when it was over the water, side-slipped and sank, putting the pilot in the water. Mr. Kesterton was rescued with some difficulty after being unhooked for about a minute.

This British representation was reduced to one the day of the race.

## The French Team

The French team also suffered greatly from ill luck originally consisting of four machines—in a CAMS flying



Official Photo, U. S. Navy

The third American entry, the Navy-Wright NW2 (450 hp Wright E-2 engine) piloted by Lieut. A. G. Garrison, U.S.N., which did not take part in the race

boat, each with a 300 hp. Hispano-Suiza engine, and two Béchereau biplanes, each with a 300 hp. Hispano-Suiza engine, one of the latter being held in reserve as in the case of the American team.

The two CAMS boats differed from one another in several important details. CAMS 28, flown by Mr. Baird, is a pusher flying boat, with wings of equal span, the top wing being straight, while the bottom wing has a dihedral. New type streamlined London radiators are fitted to the front engine of CAMS 28, while those on CAMS 29, which was flown by Captain P. C. Parker, differ in shape from those on CAMS 28, except for a treble propeller. This is an odd design, the engine having greater low resistance than the pusher arrangement used on CAMS 28.

The two Linton flying boats with their tandem engine arrangement were the "bad weather" class of the French team. These ships are of extremely sturdy construction and could land and take off again in case of a very strong sea that would have沉没ed the smaller flying boats. Both were finished only a few days before the race, and in order to reach Ceylon for the navigability trials, they had to fly across the Channel on the evening of Sept. 25. On that day a full gale was blowing with tremendous seas. Nevertheless the two pilots, M. Kesterton and Lieutenant Bertrand of the French navy, successfully completed the two boats to Ceylon. On landing Lieutenant Bertrand took off again, flying shore to shore to an extent that the boat is to be withdrawn from the race.

A 450-hp. Fokker entry which was originally announced, the Blériot-Béchereau, with a French built "Jupiter" 450 hp. engine, did not materialize.

## The Italian Withdrawal

Italy was to have competed for the race with two aircraft, one Savoia and one Macchi. A week before the race date, however, the firms stating in the Italian press that government orders kept them too busy to be able to provide suitable entries within the time available.

Thus, on the day set for the navigability trials there remained three American (two Curtiss and the TEBA), three French (two CAMS and one Linton), and two British (one Béchereau).

With the exception of the latter, which resulted on taking off, as is explained above, all the contestants successfully fulfilled the conditions of these trials. On completing the morning and flying trials the planes were hauled to shore overnight for the 6 hr. anchorage test, with the exception of the Linton boat piloted by Debelon which turned to its base early in the morning. The next morning the two CAMS planes, with switches with much interest on the navigation board, as it was believed that they would have a tendency of "over-pushing." However, they behaved perfectly, starting very fast and getting off well. Lieutenant Garrison was required to carry out part of the trials a second time as he mismanaged the contractions of the first time, and this he did in the satisfaction of the judges.

The race proper was held on the next day, Friday, Sept. 28,



sign. He has seen it that no unconsidered trick was forgotten in the original layout and was afterward permitted to cause a minor irregularity of surface. As a matter of fact there are one or two small fittings for bracing wires that are underneath the top wing which look as though they might have been more carefully kept out of the straight. They are very small and, as far as I can see, they have the least effect. It is extremely difficult to make satisfactory wire tension under the wing surfaces—doublets the wing radiators add to the difficulty—and there is precious little of these fittings anyway.

Otherwise the machines are as nearly perfect in this respect as they could be. The ailerons—in the bottom wing only—are mounted onto the wing so that one could not put a strip of thin paper through the gap. Similar to this and almost to full-plane hinge gaps are covered with wider sheeting so

as to ensure development of high-performance engines to this extent since the war—although the engine work actually is completed in this country under much more severe conditions on superchargers has probably been of greater practical value than that accomplished in America.

Over and above engines if may be mentioned that what the British Aircraft Industry has put forward is a series of aircraft racing trophies every year first at all its own attempts to the Gordon Bennett trophy and secondly in their own Pulitzer Trophy races. Last year alone America built more racing machines than Great Britain did, but it is whole history. Thus the actual expenditures which have made it possible to produce the Schneider Cup race in extremely large—and almost the whole of it has been provided by the Government of the United States.

But it may be desired whether the United States single-

### WINNERS OF THE SCHNEIDER CUP RACES 1924-1925

Year	Place	Type of Plane	Speed miles per hour	Winner	Name of Pilot
1923 Monaco		Supercharged boat monoplane	100 mph	1st, Cup	Perricot
1924 Monaco		Supercharged boat biplane	180 mph	1st, France	Howard Pixton
1925 Brooklands, England		Scour biplane flying boat	160 mph	2nd, England	John French
1926 Venice, Italy		Scour biplane flying boat	220 mph	No award	Janssens
1927 Naples, Italy		Scour biplane flying boat	260 mph	3rd, Italy	Ed. Biagioni
1928 Naples, Italy		Scour biplane flying boat	300 mph	4th, Italy	De Bergamo
1929 Naples, Italy		Scour biplane flying boat	330 mph	5th, Italy	Capt. H. C. Baird
1930 Cannes, England		Scour biplane flying boat	340 mph	6th, France	Capt. H. C. Baird
1931 Cannes, England		Scour biplane flying boat	350 mph	7th, France	Capt. H. C. Baird
1932 Cannes, England		Scour biplane flying boat	360 mph	8th, France	Capt. H. C. Baird
1933 Cannes, England		Scour biplane flying boat	380 mph	9th, France	Capt. H. C. Baird

that there is no exp in fact, and there is not a preexisting contract to give him wages for the machine.

The machine takes off in the short. The hand holes which the Indians take off in the other cups, and those for inspecting the fuel interiors are recessed slightly into the surface. After these tanks were filled they were covered neatly by a square patch of dope-on fabric, varnished as perfectly as the rest of the fusel and giving an unbroken surface.

The undersurfaces which go down into the fusel—apparently they are built in before the fusel is planked—and there are no fittings digressing their exposed surface. And so on throughout.

### High Class Workmanship

Not only is the workmanship and surface finish of a very high class—but it is obvious that the designer has taken an unusual care in putting up the last detail of his design as he tends to the unusual lay-out. In fact he must have taken considerably more.

The merits of the American racers have been dealt with at this considerable length in order to make it quite clear how the Americans have achieved their success. It has been very generally asserted that the explanation is simply that the American Government was willing to spend as much money as might prove to be necessary in order to win the Schneider Cup, whereas the British Aircraft Industry had no money to spare to defend it.

### The Real Cost of Winning

This explanation is accurate enough in its way. It is not however the whole explanation. In the first place it has to be admitted that the British Aircraft Industry has done a great deal of financing the Schneider Cup and in a very small proportion of what has led to its speed to make that road possible. The Curtiss D-12 engine is a direct descendant of the Curtiss Kardinal engine produced just after the war. Between that engine and the present there are at least two quite distinct varieties of Curtiss 12-cylinder high-performance engine each one as advance toward the ideal racing engine.

No English manufacturer has been able to carry on the

same expenditure on this special object has an Aerofit Industries which is engaged in a general concern to overshadow the British Aircraft Industry in the production of aircraft. The Americans lost England—and still more thoroughly France—in the Schneider Cup race because regarded as nothing more than a contest between Curtiss and their associates have shown themselves to be anything other than sportsmen at the highest sense of the term. But it is pretty obvious that no private individual or organization can afford to compete in such a test with the Government of the nation. In itself

Personnel one believes that it would be all in the good was the present effort by the U. S. Government to this writer disclosed to others. Inter-Governmental sporting events should have the longest results on International relations if they are to become normal events—but one cannot expect the British Aircraft Industry to negotiate on level terms with the American Government.

If the Air Ministry agrees with America as to the importance of racing as a method of developing the technique of aircraft design then it is up to it to accept the perfectly open and honest challenge which America has offered, and to enter a team in the Schneider Cup or the Pulitzer Trophy races either next year or the year following.

### The "Sea Lion"

The present characteristics of the "Sea Lion" are already pretty well known, because the machine is actually that which won the Schneider Cup last year at Venice. But certain modifications of detail have been made. The nose of the hull has been modified—the worked "root" of recent Supermarine

Boats we have to learn that racing machines cannot safely be operated at the last minute. The perfection of detail, the avoidance of every unnecessary compromise are essential to the design of a successful racing airplane.

In aircraft boats of either type or class there are two conflicting requirements of aerodynamic efficiency, practical utility, and cost, and British designers who have been brought up costly to design for practical utility seem sometimes inclined to underestimate the aerodynamic importance of detail design on the assistance of the complete machine.

Taking everything into consideration one has no doubt whatever that Great Britain can bring the Schneider Cup home again in 1934. If you like, let's have the year following. If we are to do it next year we have to start work of soon and soon money has to be made quickly.

### Inter-Governmental Sports?

But on the whole the question of whether we are to try for the Cup again seems to be a matter for the Air Ministry to settle up with the Treasury. One had an idea that the



Photo: G. H. S. Market

Two of the French contestants in the Schneider Cup race—on the left, the *Lorraine LI* (five 400 hp, *Lorraine* engine) piloted by *Dubois*; on the right, the *CAMS 16* (360 hp, *Hispano*) piloted by *Peltier d'Outy*.

Schneider Cup was instituted as a sporting Trophy. Since the advent of the now-aerodynamically-propelled vehicle we have had to modify men's views on the subject of the connection between sport and engineering as far as endurance and airplane racing is concerned.

From the advice of the U. S. Government as a direct competitor in a "reporting" event is somewhat of a startling innovation. Obviously if the American Government has decided that the development of racing aircraft will lead to technical developments of real utility it is perfectly entitled to finance the same and build up a stock room and store them for international competition and verify them. And similarly if any other the American team comes to Cannes and their associates have shown themselves to be anything other than sportsmen at the highest sense of the term. But it is pretty obvious that no private individual or organization can afford to compete in such a test with the Government of the nation. In itself

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Photo: G. H. S. Market

The British Schneider Cup team—On the left, the Supermarine "Sea Lion III" (550 hp "Nimrod" "Lion" engine) piloted by H. C. Baird; on the right, the Blackburn "Puffet" (450 hp "Napier" "Lion" engine).





# U. S. ARMY AND NAVY AIR FORCES

## U. S. ARMY AIR SERVICE

### Mitchel Field Carnival on Nov. 6

The Air Carnival scheduled to be held at Mitchel Field, Garden City, L. I. on Oct. 31 has been postponed to October, Day, Nov. 6.

Just as the final plans were completed for what Mitchel Field hoped to make the greatest Air Carnival yet staged by the Air Service, telephone instructions from Major, 2d Cavalry, Army, informed that the War Department had decided to postpone the 6th. Because of the "Lend-Lease" Bill all roads and ditches that the demonstrators not be held as a "handy."

With less than forty hours to act the wisdom publicly was given to the postponement of the demonstration to October Day, Nov. 6, but in spite of several thousand persons journeyed to the Field, many from a distance of over a hundred miles. The newspapers in three states had devoted editorials to the event, and special short news it was impossible to overlook. It was noted that these persons were duly apprised.

Concerning newspaper editors, judging the demonstration from the publicity it had received and the interest it had aroused, estimated the possible attendance at several five thousand, and it is believed that this figure would have been passed if the actual date had been set earlier. The public interest in the demonstration to this degree necessitated a new date. Mitchel Field hopes to make a sufficient effort to put the demonstration alive and it feels that behind it has the entire Air Service. To do this it will require new attractions. Those that we expected have been discussed by the press to a point where they are no longer of news value.

The Flying Bomber is shown a necessity. With something new to talk about and the public's interest in the demonstration still strong, the best course to favor the Air Service in the question at hand, Mitchel Field will get off to another flying start. For the 6th the advance sales of boxes show was twenty five hundred dollars.

In order that the public might be familiar with the reason for the postponement, the following statement was issued by Maj. William N. Henley, A.S., Commanding Officer of Mitchel Field: "I am awaiting your receipt of the instructions from the War Department."

"The action of the Lord's Day Air Alliance has injured a worthy charity that is very close to the hearts of service people. The Army Relief Society, which cares for the widow and orphans of the men who die in an hour of duty, will suffer unless those persons who believe that any day is a good day except Sunday make a point of attending the Air Service. It is my desire that the Air Service be allowed to go forward with all parts of the meet with the good people who have supported us in this worthy cause. We have already made arrangements to give even a larger and better demonstration than that planned for October 2d."

### New Commandant for McCook Field

Cpl. Ira S. Baker, on duty in Washington, D. C. in the office of Maj. Gen. Mason M. Patrick, Chief of the Air Service will probably be placed in command of McCook Field, Ohio, within a short time as successor to Maj. W. W. McElroy, who is to be transferred to some other station under Army regulations, which provide that officers must spend one year in our states only with troops.

The official orders have not yet been issued.

### Changes in Stations

The 12th Obs. Sq. and the 5th Photo Sq. have been ordered from Fort Riley, Kans. to St. Louis Field, Mo.

Fifth Photo Sq. and 2nd Air Intelligence Sq. have been assigned from Fort Huachuca, Ariz. to Marfa, Tex.

### Relief for Aviators

Owing to the large number of casualties among officers and enlisted men of the Army Air Service, it recently was proposed that arrangements be made by which service members of the families of those killed should be made the beneficiaries of a relief fund. To this end Maj. Gen. Mason M. Patrick, Chief of the Air Service, has directed that the Bureau of Air Aviation, Washington, D. C. be requested to make available by which a fund would be available to help those that were left without means of support, so as frequently occurred. The situation was the most urgent because the rate of insurance for those engaged in this hazardous occupation was higher than most of the peace officers and enlisted men could afford.

The inquiry conducted by the board led to the decision of the Army Relief Society, long established and for many years engaged in work of philanthropic character. Negotiations resulted in an arrangement with the society to suffice as its benefits the Air Service personnel. Of course, it did that already to an extent as extent as possible, but resources are somewhat limited, and could not begin to take care of all the more highly regarded represented by the members of the Air Service personnel.

If funds were available to raise funds by special Air Service events, most of them to be known as Air Carnivals, all for the aid of the Army Relief Society, the proceeds would go into the treasury of the organization and provide means of taking care of people that required aid as a result of air service personnel. After the Air Service personnel have been repaid with enthusiasm, with the result that a carnival recently held at Selfridge Field, Mich., yielded, apportioned \$25,000, and one at McCook Field, Ohio, about \$18,000, the total being more than two-thirds in the treasury of the society.

### McCook Field News

According to Major George, performance tests made with a Curtiss Pursuit P-12s plane at McCook Field gave the following results:

Absolute ceiling, 22,000 ft.; actual ceiling obtained during climb, 22,200 ft.; theoretical service ceiling, 22,200 ft.; actual service ceiling obtained during climb, 21,200 ft.; rate of climb at sea level, 3000 ft./min.

The De Havilland biplane has been assigned to the Air Service Technical Museum at McCook Field, where it will be placed up exhibition. The biplane which housed the biplane will be turned into a swimming pool, and the airplane which has been in damage for some time will be converted into a gymnasium.

A D.H. fitted with an inverted Liberty 400 hp engine was one of the entries in the St. Louis meet. The ship was not built at McCook Field and gave a satisfactory performance. The plane flew and maneuvered well, and it is said that its longitudinal stability is better than that of the standard DH-4. The stability at an angle of attack of the sloping engine seeking, acceptably good, although the looks of the ship are not particularly strong.

A ten-hour destructive whirling test at 3000 rpm. was a solid dynamosphere propeller. The results were checked at McCook Field.

Another destructive whirling test at 3500 rpm. was also performed on a propeller designed for the Army-Curtiss 1D. This propeller was also in satisfactory condition at the end of the ten-hour run. A destructive test of the Curtiss 1D at 3000 rpm. was completed on a propeller for the Navy at 3000 rpm. and was accepted by Wright T-2 engine. This propeller was built by Standard Steel Propeller Co. and had dimensions, blades according to an Air Service modified drawing. This propeller passed the test in a very satisfactory manner.

November 5, 1933

AVIATION

### Pennsauken to St. Louis Flight

The two F2s from the Naval Air Station at Pensauken, Fla., returned from St. Louis on Oct. 26. The dashdown was commanded by Lt. Ralph Dawson. He went on board while at St. Louis, and the planes were commanded on the return trip by Lt. Andrew Crispino.

The two planes, which were to have been used in the annual Pennsauken to St. Louis Air Races, New Orleans, Decatur and Phenix City, Ala., Greenville and Mobile, Miss., Memphis, Tenn. and Cagin, Ill. While awaiting the arrival of the planes, which was to have been November 1, Lt. Dawson, Lt. Crispino and Lt. John H. Gandy, Jr. of the Navy, participated in the first race since the opening of the Pennsauken to St. Louis Air Races. The race was suspended due to the lack of wind, but the race was opened again on November 2, and Lt. Dawson and Lt. Crispino won the race.

The following is quoted from a report on the flight: "Much credit is due to the Engineering Department of the station and the mechanics of the planes for the perfect performance of the engine and planes throughout the trip."

### ZR1 Christened U.S.S. Shenandoah

U. S. "Shenandoah," an Indian name meaning "Daughter of the Stars," was given to the newest naval aircraft on Oct. 29. The ceremony took place at the Naval Air Station at Lakehurst, N. J., about 2 p. m. The Secretary and Mrs. Denby marched to Lakehurst from Philadelphia and arrived there in time to receive the trophy that was given to the two honored aviators at the ceremony by the Secretary, Mrs. Denby. The ceremony followed the luncheon, and was followed by a movie from the station field. Instead of the conventional shrubbing by liquid, a number of pigeons were released as Mrs. Denby gave the ship her new name. Flowers were dropped on the craft from the top of the hangar in which she was built. Lt. Commander W. E. Denby, decorated with American Legion Service Medal, was the guest of honor. After the ceremony the Secretary and Mrs. Denby and their immediate party took a short flight in the "Shenandoah" in the vicinity of the air station. After the flight the party returned to Philadelphia.

It has been announced that no more extended flights will be made by the Shenandoah until the winter comes, in connection with Navy Day activities. It is the plan for the ship to make flights with the Fleet in southern waters sometime this year, after the tent and training flights have been completed.

### Orders to Officers

Gen. Max F. Schaefer, detached Submarine Base, San Pedro, Calif., to Naval Air Station, San Diego.

D. C. C. W. A. Pope, detached Naval Air Station, Anacostia, Wash., Comdr. Edward G. Deasy, detached U.S.S. North Dakota, to supply and accounting officer, Naval Air Station, Hampton Roads.

Chaplain Eddie S. Quigley, detached Navy Yard, Norfolk, to Naval Air Station, Hampton Roads.

Comdr. Alfred E. Montgomery, detached Aircraft Squadrons Battle Fleet, to Aircraft Squadrons Scouting Fleet.

Lt. Col. J. D. Duran, detached Aircraft Squadrons Battle Fleet, to Aircraft Squadrons Scouting Fleet.

Lt. Col. Thomas P. Jeon, detached Aircraft Squadrons Battle Fleet, to Aircraft Squadrons Scouting Fleet.

Col. George F. Kallis, to Aircraft Squadrons Scouting Fleet.

### Death at Anacostia

A dance was held at the Naval Air Station at Anacostia, D. C. on Saturday night, Oct. 28, in celebration of the Navy's victories in the Pulitzer and Schneider Cup Races. The dance was presided over by four celebrities bearing books and one barrique boat. The dancing was held in the hangar at the station, the floor of which was covered with canvas. There were about 1500 guests present, including the officers of the station and their families. Several officers from the Bureau of Aeronautics attended.

### Dinner to Racing Pilots

A testimonial dinner to the Navy fliers of racing pilots who competed in the International Air Races at St. Louis, the Schneider Cup Race in England and the International games, which were given by the Heligan Club on Oct. 22 to officers identified with the Air Service.

The dinner was held at the Hotel Heligan, 12th and Washington. In addition to officers of the Bureau of Air Aviation there were large delegations present from the Marine Corps at Quantico, the Naval Air Station at Anacostia and from other stations of the Navy Department.

The occasion was largely impromptu, but the first time since the inception of the Navy fliers that there was a gathering of national and international aviators. The interest was great in the past month, and focused attention on the accomplishments in naval aviation during the past year.

The dinner was held in the hall of the Heligan Club, which is located in the heart of the business section of St. Louis. The dinner was opened with a speech by Lt. Col. T. C. Turner, U. S. Marine Corps, acted as toastmaster.

The following is quoted from a report on the flight: "Much credit is due to the Engineering Department of the station and the mechanics of the planes for the perfect performance of the engine and planes throughout the trip."



Photo Courtesy  
Admiral Mitscher congratulates Capt. F. O. Reiter and Lt. D. Palmer, U.S.M.C., on their flight from Pensauken to St. Louis, Mo.

He spoke. The general influence of the instructor put forestry to rest and paved the way for interesting discussions on the outstanding features of the plane by the participants.

Gen. Adm. Moffett, as Chief of the Bureau of Aeronautics, also headed the organization of Naval Aviation for the rapid development of naval aviation in the Navy. On the same occasion of the announcement you were awarded a trophy for your flying trophy accomplishment.

Lt. Cmdr. M. A. Minster and Lt. Cmdr. W. W. Wood, who headed the St. Louis and McCook Chap teams, respectively, and Lt. Col. A. H. Lawrence, who represented the Navy at the International Heligan Cup, responded to the speakers and gave general��述 of the events which led up to success involved in the races. Then came the personal response from the pilots who participated in the contests.

Lt. Col. W. Williams, winner of the Pulitzer Trophy, had much to say upon his when he sang composed by Lt. Col. C. W. A. Pope. The words and accompaniments of Williams were reflected in the music of the song, which was composed by Williams and Commander Webster as a duet. The latter is married to a woman in the crew.

The material and design portions of the Bureau of Aeronautics were called to account in the persons of Captain Land and Commander Hanlon and passed down to the leading contestants. How can you but sample to go fast?" The answer, which was given, was to eliminate all unnecessary weight, or was said, to depend on power. The major because of the remarkable fact that planes produced under the direction of these distinguished technicians "do go fast."

### Squantum Reserve Air Station

The Naval Reserve Air Station at Squantum, Mass., opened its gates to get in all the flying that is physically possible. During the month of October, 1933, with only two planes in commission, there was a total of seventy flights, with a flying time of 200 to 15 min.





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